

CLAIMS

1. A warming/chilling apparatus, in particular for a pain treatment unit, comprising a heating device and a cooling device for alternately heating and cooling a heating/cooling element to a high and a low temperature respectively, wherein the heating device and the cooling device are designed and arranged relative to each other in such a way that the change between the high and the low temperature is possible within three minutes, wherein the temperature difference between the high and the low temperatures is at least 40°C.
2. The warming/chilling apparatus as defined in claim 1 characterised in that the high temperature is at least 50°C and the low temperature is at most +10°C.
3. The warming/chilling apparatus as defined in claim 2 characterised in that the low temperature is less than 0°C.
4. The warming/chilling apparatus as defined in claim 1 characterised in that the heating device and the cooling device are designed and arranged relative to each other in such a way that a change between the high and the low temperatures is possible within a minute.
5. The warming/chilling apparatus as defined in claim 4 characterised in that the heating device and the cooling device are designed and arranged relative to each other in such a way that a change between the high and the low temperatures is possible within 30 seconds.

6. The warming/chilling apparatus as defined in claim 1 characterised in that the heating/cooling element has a heating/cooling face, and the heating/cooling face includes at least one surface of the heating device or surface of the cooling device.

7. The warming/chilling apparatus as defined in claim 6 characterised in that a surface of the heating device forms the heating/cooling face, the cooling device is arranged on the side of the heating device, that is remote from the heating/cooling face, and the heating device has a low heat capacity.

8. The warming/chilling apparatus as defined in claim 7 characterised in that the heating device is an electrical heating plate.

9. The warming/chilling apparatus as defined in claim 8 characterised in that the thickness of the heating plate is less than 0.5 mm.

10. The warming/chilling apparatus as defined in claim 1 characterised in that the cooling device is a thermoelectric element.

11. The warming/chilling apparatus as defined in claim 1 characterised in that a cooling body for dissipating excess heat is arranged at the side of the thermoelectric element that is remote from the heating device.

12. The warming/chilling apparatus as defined in claim 6 characterised in that the heating device and the cooling device are so designed that a surface of the heating device and a surface of the cooling device alternately form the heating/cooling face.

13. The warming/chilling apparatus as defined in claim 12 characterised in that the heating device includes tube-like portions for the flow of a heating fluid and the cooling device includes tube-like cooling portions for the flow of a cooling fluid, which are each made from an elastic material, and that there is at least one pressure producing means for alternately producing high and low fluid pressure in the heating fluid and the cooling fluid respectively, wherein the change of high and low fluid pressure is effected in such a way that the heating fluid is at a high fluid pressure while the cooling fluid is at a low fluid pressure and vice-versa, and wherein the tube-like heating portions and the tube-like cooling portions as well as the high fluid pressure and the low fluid pressure are matched to each other in such a way that those tube-like portions in which the high fluid pressure prevails cover over the tube-like portions in which the low fluid pressure prevails.

14. The warming/chilling apparatus as defined in claim 13 characterised in that the tube-like portions are arranged in mutually juxtaposed relationship on a common plate.

15. The warming/chilling apparatus as defined in claim 13 characterised in that the tube-like portions comprise a rubber-metal mixture.

16. A pain treatment unit comprising a heating device and a cooling device for alternately heating and cooling a heating/cooling element to a high and a low temperature respectively, wherein the heating device and the cooling device are designed and arranged relative to each other in such a way that the change between the high and the low temperature is possible within three minutes, wherein the temperature difference between the high and the low temperatures is at least 40°C.

17. A pain treatment unit comprising a heating device and a cooling device for alternately heating and cooling a heating/cooling element to a high and a low temperature respectively, wherein

the heating/cooling element comprises an electrical heating plate having a low heat capacity and a thickness less than 0.5 mm as the heating device, a surface of which forms a heating/cooling face of the heating/cooling element;

the heating/cooling element comprises a thermoelectric element as the cooling device which is fixed by means of a thermally conductive adhesive to the side of the heating device, that is remote from the heating/cooling face; and

the electrical heating plate and the thermoelectric element are driven such that a change between the high and the low temperature takes place within three minutes and that the temperature difference between the high and the low temperatures is at least 40°C.

18. A pain treatment unit comprising a heating device and a cooling device for alternately heating and cooling a heating/cooling element to a high and a low temperature respectively, in which

the heating device includes tube-like portions for the flow of a heating fluid and the cooling device includes tube-like cooling portions for the flow of a cooling fluid, which are each made from an elastic material;

there is at least one pressure producing means for alternately producing high and low fluid pressure in the heating fluid and the cooling fluid respectively, wherein the change of high and low fluid pressure is effected in such a way that the heating fluid is at a high fluid pressure while the cooling fluid is at a low fluid pressure and vice-versa; and

in which the tube-like heating portions and the tube-like cooling portions as well as the high fluid pressure and the low fluid pressure are

matched to each other in such a way that those tube-like portions in which the high fluid pressure prevails cover over the tube-like portions in which the low fluid pressure prevails, so as to form a heating/cooling face of the heating cooling element, such that the change between the high and the low temperature is possible within three minutes, wherein the temperature difference between the high and the low temperatures is at least.